

M.O.T.D.

The OS-9 Users Group Newsletter

Issue #3, 1995

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MOTD Information

The OS-9 Users Group, Inc. is a not-for-profit organization, registered and incorporated in the state of Iowa, whose members share an interest in the OS-9 operating system in all of its various forms.

MOTD is the official newsletter of the *OS-9 Users Group, Inc.*

The OS-9 Users Group, Inc. has no affiliation with **Microware** or any other organization.

The opinions expressed by the authors of any articles or columns are not necessarily the opinions of the Editor, Publisher, columnist, nor do they reflect the policies of *The OS-9 Users Group, Inc.*

The **MOTD** will be printed a minimum of four times per year.

To receive **MOTD** you must be a member in good standing of *The OS-9 Users Group, Inc.* in accordance with the bylaws.

To become a member in good standing you must pay the yearly dues of \$25.00 US funds (\$30.00 US funds if you live outside the US and Canada) and obey all of the membership rules set forth in the Constitution of The Users Group and the bylaws.

Dues should be made payable to:

The OS-9 Users Group, Inc.
6158 West 63rd Street
Suite 109
Chicago, IL 60638
U.S.A.

Memberships run for one year from the date received by the Users Group. Send a SASE for a membership kit which will include a membership form and information about the Users Group.

Please remember that this is a self help organization, and also a non-profit organization incorporated in the state of Iowa and as such it is directly governed by the laws of that state as well as all federal laws. Accordingly, dues are non-refundable in accordance with both state and federal law.

Reprints or back issues of the **MOTD** are available to members in good standing at the cost of \$1.50 each plus \$0.50 shipping (US funds). Please send a SASE and a list of the issues you wish sent to you.

Here is a list of the current *OS-9 Users Group* officers:

Position	Name
President	Colin McKay
Executive Vice Pres.	David Graham
Director	Ed Gresick
Director	Eddie Kuns
Director	Ken Scales
Vice Pres. (Comm.)	Paul Jerkatis
Vice Pres. (OS-9)	Brian Goers
Vice Pres. (OS-9/6809)	Mike Rowen
Secretary	Howard Luckey
Treasurer	Br. Jeremy
Librarian	Dave Kelly
MOTD Editor	Joel Mathew Hegberg

MOTD Contributions

Articles, editorials, "letters to the Editor/Board of Directors", personal ads, graphics, or columns may be submitted by using the following means:

E-mail to JoelHegberg@delphi.com, E-mail to 'Sysop' of SandV BBS [(708) 352-0948], E-mail to the *OS-9 Users Group* at os9ug@sandv.chi.il.us or by mail to *The OS-9 Users Group* address in Chicago. All submissions should be in pure ASCII format.

The submission of material does not guarantee publication. All publication of material is subject to review by the Board of Directors and the **MOTD** Editor, and must not be in conflict with the stated purposes of the Users Group as defined by the constitution and bylaws of the Users Group. The Board of Directors may also establish additional guidelines for acceptance to publication. Submission deadlines are four weeks before actual printing of the **MOTD** issue. *All printed material is subject to nominal editing by the MOTD Editor for clarity.*

Suggestions for making **MOTD** a better publication are welcome. Letters may be addressed to the **MOTD** Editor and mailed to the Users Group address or sent directly to JoelHegberg@delphi.com. E-Mail can also be sent to the following Delphi members: NIMITZ, MITHELEN, LUCKYONE, BRIANGOERS, EDDIEKUNS, EDELMAR, MROWEN, REVWCP, and KSCALES. You may also sent E-mail to os9ug@sandv.chi.il.us.

MOTD Advertising

Commercial advertising is available in **MOTD**. Please send a SASE for current rates. All ads should be submitted as a camera-ready copy. We reserve the right to limit the size and quantity of ads.

SandV BBS (708) 352-0948

The SandV BBS is a BBS being maintained by Paul Jerkatis to provide Internet access.

From the President

Getting close to the middle of June now, and winter is definitely gone! This issue, like the last one, is being sent out to as many industrial users as we can find in order to make them aware of the group (and perhaps join), and to encourage them to place ads to reach new customers. If your mailing label has the word **SAMPLE** on it, we encourage you to fill in the membership application and join the Users Group.

The Chicago Fest is over for another year, along with our Annual General Meeting. Elsewhere in this issue are the minutes from that meeting, along with a financial report.

Special thanks also to Ken Scales for taking over as Editor for this issue. Joel is moving and starting a new job, and will resume wielding the Editor's pen for the next issue.

Elections

All three positions that were up for election were filled by acclamation. The current BOD consists of the following:

Position	Held by
President	Colin McKay *
Executive VP	David Graham *
Director	Ken Scales *
Director	Eddie Kuns
Director	Ed Gresick

* Chicago Election Results

Congratulations to David Graham (Blackhawk Enterprises) as the new Executive Vice President, and Ken Scales who returns as a Director. I have returned as President.

Chicago Fest

Thanks to the Glenside Color Computer Club and its members for putting on the Chicago fest once again. As always, a fine job.

Thanks also to those UG members who manned the UG booth during the Fest. Volunteering (or being volunteered!) wasn't that painful, was it?

Kurt Johnson, from the KD Consulting Group, gave a presentation on the Sculptor 4GL+SQL package. The first part of the presentation was a general overview of Sculptor, the philosophy behind it, and a demonstration

of a simple application written under Sculptor. Second part of the presentation covered a system running under Sculptor on an OS-9 system at NASA. This system is used to collect information from the Space shuttle. Our sincere thanks to Kurt for fitting a side trip to the Fest into his schedule and doing the presentation.

Upcoming Fests

Atlanta Fest: 29/30 September 1995 (See the ad in this issue)

Chicago Fest: TBA 1996

Feedback

Received a thank-you from Joel Hegberg for the GU award in Chicago (see the minutes from the Annual General Meeting. He was caught completely by surprise and very embarrassed, much to the amusement of those watching.

We also received some positive feedback about the two new columns that premiered last issue -- "Entry Level C", and "The Toolbox". There will be some interesting columns and articles making their debut in the next issue as well, in addition to "A Basic09 Tutorial" by Bob Devries from Australia and "What's New" in this issue.

Membership Renewals

We received a good number of renewals (and new applications) at the Chicago Fest, along with several membership applications from Industrial users in the mail.

Finally got all the paperwork into the appropriate files, so please check your membership expiry date on the mailing label! They are all up to date as of 15 May, so if anything needs correcting, please let us know.

Also a reminder to send in your OS-9 Sourcebook form from last month. This project can benefit all of us.

Library

In Chicago, some discussions were held with Dave Kelly from the OS-9 Community Network (OCN). The results from this discussion are covered in the article on the OCN library elsewhere in this issue. The end result should be of benefit to both members of the UG and OCN. Dave Kelly will be serving as UG Librarian. UG members will get access to both the OCN and UG libraries, which are now combined and distributed with the OCN library. See the article in this issue for more details.

Colin McKay
President

Annual General Meeting Minutes

Minutes of the Annual General Meeting of the OS-9 Users Group, Inc. Held at Holiday Inn, Elgin, IL April 29, 1995

At 5:14 PM the President Colin McKay called the meeting to order following the presentation on Sculptor by Kurt Johnson of KD Consulting.

The first order of business was the election of officers to the positions of President, Executive Vice-President, and Director at Large. Three candidates had agreed to serve in these positions. They were:

Colin McKay, incumbent, for President;
David Graham for Exec VP; and
Ken Scales, incumbent, for Director at Large.

The President opened the floor for any nominations from the members attending, and after none were presented, declared the candidates elected by acclamation. Later in the meeting David Graham gave a short acceptance speech expressing his willingness to serve as Exec VP.

The next order of business was a report on the State of the UG. Colin reported that the Group is healthy. The treasury is in good shape and the MOTD is being printed on a regular basis. Later in the meeting Br. Jeremy, the UG Treasurer, gave a brief financial report.

The President reported on the need for a UG Librarian since Zack Sessions had resigned. The hope is to get someone who has connections to OCN (OS-9 Community Network) because our present library is relatively small and probably dated whereas OCN has a rather extensive collection of software. An association between the UG and OCN will be investigated. There was some discussion with Dave Kelly, one of the OCN Librarians, who was at the meeting.

There was some discussion of the purchase of a Fax/Modem for the UG to help develop Fax software for both OSK and OS-9/6809. Some other software also needs to be found and ported or developed for OSK. No decision was made because this is something for the BOD (Board of Directors) to handle.

The members present were reminded that the UG does support OS-9 in all its forms. As such, efforts are being made to expand coverage of different areas in the MOTD.

The President noted that for the first time there were ads in the MOTD, and that this allowed the UG to print extra copies so we could send samples to industrial users in order to let more people know we exist and to attract new

members. Joel Hegberg, editor of the MOTD, mentioned the importance of feedback so that the newsletter can better serve the members. Also, there was a call for submission of articles.

There was a question from the floor about when the UG might begin to hold its own national meetings. The President stated that there had been a lot of discussion about such meetings over the weekend and that indications from industry reps he had talked with had been positive.

Another question was about our efforts to get our name better known. Brian Goers, VP-OSK, reported on his efforts to make contact with APCUG (Association of PC Users Groups) so that the BOD could consider joining the Association.

Ken Scales, Director at Large, mentioned that the BOD meets online on Delphi the first Wednesday of every odd month and noted that UG members could pass on their suggestions and concerns to any BOD representative prior to these meetings for discussion. Email addresses of the Board members and officers are printed in the MOTD. At the moment the use of email seems to be the least expensive way to contact people.

Brother Jeremy, Treasurer, reported on the release of Ver. 3 of OS-9 Level II. For the most part, the working patches have already been released to the public, and the small number of remaining changes would require extensive work before release.

He also mentioned that ports of other Radio Shack code are coming and that he is in the process of searching for software developers who have left our community and who might be willing to release their work to the public or to vendors for continued development and use. He asked that anyone who knows of such people to submit their names to him.

The last order of business was the presentation of a RU award to Boisy Pitre, to accompany the GU award he received in Atlanta. GU awards were also presented to Joel and Tim.

The meeting adjourned at 6:02PM

Howard Luckey
Secretary

Four of us, Alan DeKok, Ken Scales, Jim Pottage and I made the trek from Canada to this show for OS-9 and Color Computer users. As always, the trip down and back by car (and travelling through US Customs with a pile of computer equipment) is almost as interesting a story as the show itself, though I won't go into that here.

The show was held in Elgin, Illinois, just west of Chicago, at the Holiday Inn. This particular hotel has all the rooms arranged around an indoor swimming pool! However, there are far too many activities going on to go swimming. Friday night was spent in the bar, catching up with old friends, and meeting people who we had only known by email. Saturday night was spent doing the same thing, although some people went into Chicago to visit the Hard Rock Cafe, or to play Laser Tag (or catching up on sleep). Sunday night's dinner is traditionally held at the Mongolian Barbecue, but due to prior commitments, we left directly from the Fest.

For those who have been to prior fests, not much has changed. There were about 25 vendors, all hawking various wares. Many familiar faces, and a few new ones. Some new products, some old ones, and some people selling gently (and not so gently) used equipment.

Biggest single shortcoming (IMO) was the large number of junk dealers. Far too many tables dedicated to selling used equipment. So many in fact that some of them decided that they didn't want to haul their leftovers back

with them, so they ended up giving them away!

Running throughout the day were various lectures. Topics this year included MIDI, Philips CD-i (Compact Disk Interactive), The KD Consulting Group's 4GL+SQL Sculptor Database, and a souped up version of OS-9 for the Hitachi 6309 processor called NitrOS-9.

New products included a 68306-based AT-bus computer which will be sold through a couple of vendors, an AT keyboard adapter for Color Computer users, and assorted software packages (games, applications and tools).

The Sculptor lecture was quite interesting (and one of the few I managed to attend). Sculptor is a fourth-generation language database with SQL which has been ported to over 140 different hardware and operating system platforms. Any applications written using Sculptor on one platform can be moved without modification to any other machine running Sculptor.

One example given of this was an application that runs at NASA to collect data from the Space Shuttle. The application is developed on MSDOS-based machines, tested using UNIX machines, and is run on an OS-9 platform for its superior ability to handle the large amounts of data which come from the shuttle near launch time.

Kudos to the Glenside Color Computer Club for sponsoring the fest.

OCN (OS-9 Community Network) BBS Sites

by Tim Jones

Sysop	BBS Name	Location	Phone Number
Terry Goode	Golden Coco	Houston, TX	713-941-1542
Dennis Mott	The Data Warehouse	Spokane, WA	509-325-6787
Ed Jones	Coco Plus	Mobile, AL	334-341-1616
	House of Fire	ON	416-601-0085
Newton White	ACS BBS Inc	Atlanta, GA	404-636-2991
Michele Dalene	The Pink Rose	CT	203-429-6338
Kerry Kowalski	The Data Stash	Whitelaw, WI	414-684-4115
Tim Jones	The Trial Run	Austin, TX	512-280-6578
John Reece	The Coco Exchange	San Diego, CA	619-272-3643
Ken Flanagan	Pot O' Gold	Prince George, BC	604-564-8869
	The Coco Library	HI	808-545-8368

Minutes for Board of Directors Meeting May 3, 1995

A regular meeting of the OS-9 Users Group Board of Directors (BOD) was called to order at 7:23 PM CT on May 03, 1995 on Delphi. Present: Colin McKay, president and chairman of the Board, and directors-at-large Ed Gresick, Ken Scales, and Eddie Kuns. Present as invited guest: Howard Luckey, secretary.

Item 1: The first order of business on the agenda was a report on the election results from the general meeting of April 29, 1995.

Officers elected by acclamation:

President: Colin McKay
Exec VP: David Graham
Director: Ken Scales

Item 2: Treasurer's Report: Brother Jeremy wasn't present for the meeting, the President, however, reported that with 18 renewals at the Fest the UG's bank account should be in good shape.

The minutes of the March BOD's meeting were approved as presented.

OLD BUSINESS:

Item 3: Vendor's Package: This is the package of UG information for vendors to include with their shipments to customers. Br. Jeremy is suppose to do the basic work and Ed Gresick is suppose to prepare the copy. Colin has some info he uses and will forward that to Br. Jeremy.

Item 4: APCUG: The Association of Personal Computer Users Group. Brian Goers has made an effort but there is no real progress yet.

Item 5: The offer from the UG to take over the advertising and subscriber obligations of Metamorphosis and OS-9 Underground. The offer has been declined.

Item 6: Connection between SandV BBS and NorthX. The connection is working now.

Item 7: Joel's Clipboard program and possible UG endorsement. Members of the BOD want to know more about the program and wish to be careful about making such endorsements. Colin plans to make some kind of announcement in the MOTD probably under a new column announcing new products.

Item 8: Contact with EFFE. Nothing to report at this time.

Item 9: Chicago Fest: Generally a favorable response.

NEW BUSINESS:

Item 10: Annual General Meeting: Some discussion about separating the OS-9 part of the Fest from the CoCo part. There could have been more PR about the UG's success in getting Kurt Johnson from KD Consulting to give a lecture.

Item 11: Level of Periodical Fund: Suggestion that \$300.00 be set aside for this fund. There was some discussion about the cost of producing the MOTD and the desirability of a report on costs. Eddie Kuns moved to set aside a fund of \$300.00 for the MOTD, seconded by Ken Scales. Motion passed.

Item 12: Authority for the President to spend UG funds: Suggestion for the President be allowed to spend up to \$100.00 per month without BOD approval while at the same time notifying the BOD about expenditures. Also, a suggestion for a petty cash fund for long distance phone calls, postage, etc.

Eddie Kuns moved that the UG establish a President's petty cash fund of \$50.00 to be handled in accordance with normal petty cash procedures. The motion was seconded by Ed Gresick. The motion passed.

Normal procedure includes converting US funds into Canadian funds and when or if the balance drops to around \$10.00 the President will submit receipts along with an expense list to the Treasurer and a new check will be issued.

Further discussion of setting a \$100.00 maximum that the President can spend without Board approval was postponed.

The Board jumped to **Item 16:** Activity Report: The UG needs to submit its annual report to the State of Iowa, Colin asked that the Board give Boisy Pitre permission to sign the document on behalf of the UG. Ed Gresick so moved, Eddie Kuns seconded, and the motion passed. Boisy was notified.

Item 13: MOTD: (No discussion. An announcement that Ken will be editor for the up coming issue.)

Item 14: UG's Library: Zack Sessions resigned the position during the Atlanta Fest. Dave Kelly from OCN has offered to fill the position along with exploring an affiliation between the UG and OCN. Such an affiliation could be beneficial to our members because of OCN's large library of CoCo and OSK stuff. Colin and Dave will work out the details. Colin asked for Board approval to appoint Dave Kelly to the position of librarian. Ken moved to appoint Dave to the position, it was seconded by Ed, and the motion passed.

Minutes for Board of Directors Meeting May 3, 1995

Item 15: The Atlanta Fest: The President will contact the Atlanta Computer Society about swapping ads in the MOTD for a booth at the Fest.

MOTD, etc. The proposal was postponed.

The meeting adjourned at 9:38PM

Item 17: Modem: Proposal for the UG to purchase a modem so Joel Hegberg can finish the port of FAX software to OSK and then to Level II. After some discussion including: a concern over the UG setting a precedence of sponsoring the development of software, competing with vendors, the present availability of a GNU FAX program, the usefulness of a modem in helping to produce the

Submitted for Board review, correction and approval by or at the next official Board meeting scheduled for July 5, 1995.

Howard Luckey, Secretary
Saturday May 27, 1995

These minutes were approved as read at the July 5, 1995 meeting of the Board of Directors.

OS-9 Users Group Financial Report

#2223 04-Jul-1995 20:59
From: IN%"RE VWCP@delphi.com"
To: IN%"KSCALES@delphi.com"

Wednesday 8:00 PM (EDT) Executive Meeting
Dear Usergroup Board of Directors Members:

Here is a reposting of the financial report for May. I have not yet received Bank Statments for June activity. However, unless there have been any deposits there should only be a service charge for June.

OS-9 Users Group
General Operations Fund Account #11828
01 May 1995 - 31 May 1995

Date	###	Description	Deposits	Withdrawls	Balance
5/01		Opening Balance			1594.74
5/03	111	Joel Hegberg - MOTD		287.85	1306.89
5/05		Deposit - Membership Renewals + MOTD Ads	495.00		1801.89
5/12	112	Colin McKay- Petty Cash		50.00	1751.89
5/12	113	Colin McKay - MOTD 9503		250.00	1501.89
5/23		Deposit - Membership Renewals	50.00		1551.89
5/31	114	Joel Hegberg - MOTD		223.16	1328.73
5/31		Service Charge		7.84	1320.89

We had maintained a MOTD account at Harris Bank, with Joel Hegberg handling deposits, etc. Since Joel has moved to Iowa, I am not certain if he wishes to continue using this account. In actuality, the procedure has been Joel charges the MOTD to his credit card and then I issue him a check for the needed amount. The actual MOTD account could probably be closed, and in my opinion should be, due to the outlandish service charges that Harris Bank issues. I have not had the opportunity to do so yet, but I still believe that we should be able to find a Bank or Credit Union to handle our account that would not charge us any fees as we are a non-profit organization. As it now stands, the service charges are approx \$100.00 per year.

Respectfully submitted,
Brother Jeremy, CSJW
OS9 Users Group Treasurer.

This is the 2nd installment of the column Entry Level C. This series of articles is targeted for the programmer who is relatively new to the C language, though you don't have to be a beginner to learn from this series.

Last time I wrote about input routines in standard C and the use of OS-9's read() system call to build functions used for single key input. One of the functions was the getche() that returned the value of the single char entered from stdin.

Now, what about getting a line of text into a string? In C a string is just an array of characters terminated by a '\0' NULL character. Standard C provides 2 functions for entering a line a text into a string, gets() and fgets(). The function gets() does no error checking whatsoever it just copies what you type into the array. If you type a string that is 25 chars long and it tries to stuff it into an array of 15 chars, the 10 additional chars are also copied into the adjacent memory addresses overwriting what was previously there! Because of this I DO NOT recommend the use of gets(). Standard C does have a function called fgets() that has error checking and will not copy the additional chars into the string. It does have a couple of interesting side effects that I really don't care for. First it will allow the user to input more than the maximum specified though it does not copy that into the string. The 2nd most annoying "feature" is its treatment of the new line char '\n'. It appends '\n' to the string! So the string "jim\n\0" is stored instead of "jim\0". I have compensated for it many times by using the following:

```
fgets(string, sizeof(string), stdin);
if (string[strlen(string)-1] == 13) string[strlen(string)-1]=0;
```

If you need totally portable code use fgets() for all string input.

As an alternative to fgets() I wrote a function called input_s(). It calls the function getche() from last time. One note: it requires that OS-9 echo be shut off during input of the string. This can be done via a setstat() system call or by calling the OS-9 command tmode. I choose the latter since it was simpler. OS-9 tmode comes in several forms, the 6809 form is what I used. OS-9/68k users would need to modify the code below to use the proper form of tmode.

Questions, comments, or suggestions can be emailed to jevestal@calweb.com.

```
getche()
{
    char keyin;
    fflush(stdout);
    read(0,&keyin,1);
    return(keyin);
} /* end getche */

input_s(string, len)
/* input line into string, this is my better version of gets() ! */
char *string;
int len;
{
    char c;
    int i,n,end=0;
    n=0;
    system("tmode -echo"); /* OS-9/68k users would have to change this line */
    for (i=0;i < len;i++) /* null string memory */
    {
        string[i]='\0';
    }
    for(;;) /* one way of doing an infinite loop in C, break will exit */ {
        if ( n+1 == len ) end=1; /* set end to TRUE */
        c=getche(); /* get one character from stdin */
        if (c>31 && end==0) /* if input is valid and eol is not reached */
        {
            string[n]=c; /* store and print char */
            printf("%c",c);fflush(stdout);
        }
    }
}
```


Entry Level C

by Jim Vestal

```
if (c==13) break;          /* end input on carriage return */
if (c==8)
{
    /* handle backspace */
    n=n-2;
    if (n < -1) { n=-1; end=0; }
    else { printf("%c%c%c",c,' ',c); fflush(stdout); end=0; }
}
if (end==1) { printf("\07");n=n-1; }
n++;
} /* end of for loop */
printf("\n");
system("tmode echo"); /* OS-9/68k users would have to change this line */
} /* end input_s */
```

Straight From the Horse's Mouth

by Colin McKay

SFTHM will return next issue.

"Sculptor was
extremely easy to learn.
We created usable code in the first week.
All we had to do
was build the database
and Sculptor generated basic code for us."

Jim Patterson

Software Applications Engineer/Confertech International

Conference calling system running Sculptor on OS-9

Sculptor 4GL+SQL Application Development System

• Extremely small memory usage • Program generator • Data query • Data dictionary • Report generator • Screen painter • Absolute portability--no conversion or recompiling required! • **The premier database for OS-9.**

SCULPTOR
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Call for information and free full-system demo.

Still on 6809?
We have a low-cost
Sculptor version
available for you!
Call (302) 378-2555
for details.

OS-9 Online Conference Schedules

DELPHI OS-9 Late Night Conferences with Chris Perrault

Monday, 24 Jul 95 - 10PM ET - Mike Rowen, VP of OS-9/6809, will discuss projects and get general feedback from users.
Monday, 31 Jul 95 - 10PM ET - Microware's David Kimble will discuss D.A.V.I.D, interactive "set top" technology.

GENIE CoCo Real Time Conferences

Every Sunday - Open discussion forum 9-10PM ET

OS-9 IRC Conferences

Type /join #os9 once inside IRC

Sunday, 30 Jul 95 - 10PM ET (GMT -4) : Open Forum
Sunday, 13 Aug 95 - 10PM ET (GMT -4) : Chat with Users Group VP OS-9/6809
Sunday, 27 Aug 95 - 10PM ET (GMT -4) : Open Forum
Sunday, 10 Sep 95 - 10PM ET (GMT -4) : Open Forum
Sunday, 24 Sep 95 - 10PM ET (GMT -4) : Open Forum

Are there any other on-line conferences happening out there?

If you know of other conferences or events that are taking place on other on-line services (AOL, Genie, CIS, etc.) please send mail to me at either address listed below. I will post any information I receive.

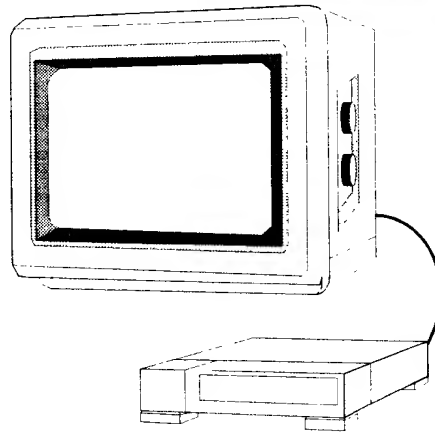
Mike Rowen
VP OS-9/6809
OS-9 Users Group
mrowen01@delphi.com

BULLETIN!!!

The media are talking about it, and on July 31st, we will be talking about it too! David Kimble, a member of Microware's DAVID team, will be on-hand to discuss technology's latest interactive multimedia information device that will be in our homes and connected to our television sets in the "not too distant" future.

Delphi OS-9 Forum Conference
July 31, 1995 at 10:00 PM EDT
DAVID Discussion with Microware's David Kimble

DAVID ("Digital Audio Video Interactive Decoder") is Microware's latest OS-9 based product, and has been getting a lot of press lately. It is a software environment customized for the new television decoders ("set-top boxes") which will form the heart of the interactive TV technology soon to be available at our fingertips. DAVID will enable a wide range of applications to be delivered directly to our homes through our TV sets. David Kimble, an active member of Microware's DAVID project, will be on-hand to answer any questions about the DAVID product.



Watch for a conference summary to appear in the next issue of the MOTD!

OS-9 Security, a wonderful second thought in the development of this well built operating system. Security under OS-9 is very limited. However, it can be confusing to those who have not used the system extensively in a multi-user environment. This series of articles will describe what computer security entails, what OS-9 has for security, and some of the inherent weaknesses of the OS-9 security system.

A computer security system consists of two integral components; the system manager that defines the needs of the security system, and the protection software and hardware that protect the computer and its data. In order for a security system to be effective, the system manager must first define the needs of the system - who and what is the system protecting against, and how much security is required. In general, the system can be built to protect executable modules (programs), data, or the operating system components. Further, the system can be designed to prevent hackers from corrupting or stealing system data, or to prevent the average user from viewing or using specific files.

In a multi-user environment the system manager is responsible for the overall security of his computer system. This includes, but is not limited to, protection against hardware vandalism, limiting use to only authorized users, prevention of lost data due to mistakes or intentional corruption, and protection of data files and software. In order to fulfill this mandate a systems manager must first define the security needs of the company. The security needs must be based on two components: who and what the company is protecting against, and the amount of money available to design and implement the security system. The host of threats against the system are limited only by one's imagination. Any system hooked to public networks, like the telephone system, are subjected to corporate thieves, hackers, and other would-be vandals. As well, every system has the potential of being breached by insiders that seek to steal or corrupt files. Further, acts of god, like lightning strikes are always awaiting around the corner to put a system in shambles. Electronic eavesdropping devices, also, threaten to steal information that may be vital to the company. And finally, the untrained employee may accidentally corrupt or delete crucial information.

(As a side note, the author of this article should be considered one such untrained user. In process of writing this article I shut off my terminal to check a screen problem and lost all my data. Fortunately, my text editor autosaves every fifty characters and very little was lost!).

With so many threats, it is no wonder that a whole new industry has popped up to protect computers. Better ways of backing up data have been developed, like tape backup

systems. Password devices have been developed, like retinal scanners that ensure that access is restricted to persons with the proper retinal pattern. Moreover, hand held password devices that tell a user the correct password for his user number, based on the time of day have been produced to ensure that only authorized users can gain access to a computer network. As well, many other devices, such as uninterrupted power supplies, have been developed to protect computers from damage.

Having identified the many threats to a computer system, what should a system manager do to protect his computer? First he should define what needs to be protected, and how important the data on the system is. After defining this basic need, the system manager must then decide how often the data needs to be backed up, and what type of physical protection is needed to prevent loss of data in between backups. For instance, does the system need to be on an Uninterrupted Power Supply, or will a surge protection power bar serve the company's needs. Second, the system manager must decide on whether computer access will be limited to on site use, or whether outside lines will be available for system use. If it is the latter, the system manager will have to then design a security system that will prevent unauthorized users from gaining access to the computer system. This may entail developing a tailored security system, or the use of the stock OS-9 password protection. It all depends on how secure the system manager wants the system to be. Thirdly, the system manager must decide on whether to screen employees in order to minimize the threat that an inside corporate thief or malicious employee may pose. Finally, the security system should be invisible to the users as they go about their business. After they log on to the system, you do not want the security devices taking up all the users time because this will defeat the purpose of the computer system and slow down productivity.

A security system is based on two integral components, the system manager who implements the security system, and the hardware and software used to protect the system. It is the system manager who is responsible for protecting his/her computer system from the host of threats that seek to destroy or corrupt the computer and its data. The system manager must define the needs of the company and decide upon how much money is available to implement a security system. When this is done, the systems manager must design and implement the system. This entails a great deal of forethought and planning, as well as constant monitoring of the system to ensure it continues to meet the needs of the company. Next instalment, I will discuss the built-in functions of the OS-9 security system, including how it works and how to effectively use it.

What's New?

by Colin McKay

Vendors with new products are encouraged to send in new product announcements along with a brief description to the Users Group address. The following items were seen at the recent Chicago Fest.

WCP306 Computer

A new MC68306 computer running OS-9 V3.0, the MGR windowing system, and five AT style slots.

Contact Wittman Computer Products

Fast 232 Pak

Buffered serial IO pack allows serial transmissions of up to 115k baud on your CoCo3.

Contact CoNect

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Connect an AT style keyboard to your CoCo3. Solderless installation. Programmable Macros.

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September 30 & October 1, 1995

The Toolbox

This issue we have a couple of new utilities and programs that you might find handy in your day-to-day use of OS-9. Submissions in C, Basic, Assembler, or anything else are welcome! They can be for OS-9/6809, OS-9/68K, or OS-9000.

Opening The Toolbox this time reveals that Bob van der Poel was down at the hardware store, playing with his hardware clock!

Also this issue is a handy line-oriented file splitting utility, courtesy of Northern Exposure. It can be used to divide a document in to pages as part of a booklet producing application.

Clock_DST_toggle

PROCEDURE Clock_DST_toggle

```
(* This will toggle the daylight saving time auto-adjust flag on the
(* MC14681A (Dallas Semi DS1287). The addresses used here are for a
(* MM/1 computer -- other systems may use different addressing.
```

```
(* By Bob van der Poel, 92/10/16
```

```
DIM Clock_Sel,Clock_data:INTEGER
DIM Value:BYTE
```

```
Clock_Sel=$e00200+1
Clock_data=$e00200+3
```

```
(* Get the current value in clock REGISTER B. We are interested in Bit 0.
(* We toggle the value of Bit 0.
```

```
POKE Clock_Sel,11
V=PEEK(Clock_data)
IF LAND(V,1)=1 THEN
    V=LAND(V,126)
ELSE V=LOR(V,1)
ENDIF
```

```
(* Now put the new value in the clock. Then we get it back and do our
(* reporting...
```

```
POKE Clock_Sel,11
POKE Clock_data,v
```

```
POKE Clock_Sel,11
V=PEEK(Clock_data)
```

```
PRINT "Daylight savings time adjustment ";
IF LAND(V,1)=0 THEN
    PRINT "NOT ";
ENDIF
PRINT "enabled."
```

LSplit

```
/*
```

File Line Splitting Utility for OS-9/68000

LSplit (C) 1995 Colin McKay v1.0

Function: splits text files by lines

Syntax: lsplit [###] filename.txt
where ### is the number of lines (default = 45)

```
*/

#include <stdio.h>
#include <modes.h>
#include <errno.h>

#define D_LINES 45 /* Default number of lines in a file */

char *filename;
int lines;

main(argc, argv)
int argc;
char *argv[];
{
    if (argc < 2 || argc > 3) {
        usage();
        exit(0);
    }
    if (argc == 2) {
        if (argv[1][0] == '-') {
            usage();
            exit(0);
        }
        lines = D_LINES;
        filename = argv[1];
    }
    if (argc == 3) {
        lines = atoi(argv[1]);
        if (lines < 1) {
            printf("\nFirst argument must be 1 or more lines.\n");
            usage();
            exit(0);
        }
        filename = argv[2];
    }
    lsplit();
    printf("Normal Exit.\n");
}

lsplit()
{
```

```

FILE *fopen(), *ifp, *ofp;
char line[128];
char fname[80];
int x, a, b, c;

a = b = c = '0'; /* ASCII 0 -- counter for output files */
x = 0; /* Line counter */

strcpy(fname, filename);

printf("\nSplitting '%s' into %d line files.\n\n", filename, lines);

if ((ifp = fopen(filename, "r")) == NULL)
    exit(_errmsg(errno, "Can't open %s\n", filename));

while (fgets(line, 127, ifp) != NULL) {

    if (x == 0) {

        if (c > '9') {
            c = '0';
            b++;
        }
        if (b > '9') {
            b = '0';
            a++;
        }
        fname[strlen(filename)] = '.';
        fname[strlen(filename) + 1] = a;
        fname[strlen(filename) + 2] = b;
        fname[strlen(filename) + 3] = c;
        if (a == '9' && b == '9' && c == '9')
            exit(_errmsg(0, "999 files reached!\n"));
        c++;

        if ((ofp = fopen(fname, "a")) == NULL)
            exit(_errmsg(errno, "Can't open %s\n", fname));
        fputs (line, ofp);
        x++;
    }
    else if (x == lines - 1) {
        fputs (line, ofp);
        fclose(ofp);
        x = 0;
    }
    else {
        fputs(line, ofp);
        x++;
    }
}

fclose (ifp);

register int t;

```

```

}
if (argc == 4) {
    spaces = D_SPACE;
    file1 = argv[1];
    file2 = argv[2];
    filetype = argv[3];
}

if (argc == 5) {
    spaces = atoi(argv[1]);
    if (spaces < 1) {
        printf("\nFirst argument must be 1 or more spaces.\n");
        usage();
        exit(0);
    }
    file1 = argv[2];
    file2 = argv[3];
    filetype = argv[4];
}

bmerge();
printf("Normal Exit.\n");
}

bmerge()
{
    FILE *fopen(), *ifp1, *ifp2, *ofp;
    char line1[256];
    char line2[256];
    char fillspace[128];
    char lineout[640];
    int flag1, flag2, x;

    flag1 = flag2 = 0;

    for(x = 0; x < 128; x++)
        fillspace[x] = NULL;
    for(x = 0; x < spaces; x++)
        fillspace[x] = SPACE;

    printf("\nBlock Merging '%s', '%d' ", file1, spaces);
    printf("spaces, and '%s' onto '%s'\n\n", file2, filetype);

    if ((ifp1 = fopen(file1, "r")) == NULL)
        exit(_errmsg(errno, "Can't open %s\n", file1));
    if ((ifp2 = fopen(file2, "r")) == NULL)
        exit(_errmsg(errno, "Can't open %s\n", file2));
    if ((ofp = fopen(fileout, "a")) == NULL)
        exit(_errmsg(errno, "Can't create %s\n", fileout));

    for(;;) {
        if (fgets(line1, 255, ifp1) == NULL)
            flag1 = 1;
        if (fgets(line2, 255, ifp2) == NULL)
            flag2 = 1;
        if (flag1 == 1 && flag2 == 1)
            break;

```

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Vendor Listing

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Ark Systems USA	PO Box 23, SANTA CLARA CA 95052	(408)-244-5358
* Blackhawk Enterprises	PO Box 10552, ENID OK 73706-0552	(405)-234-2347
* Bob van der Poel Software	PO Box 355, PORTHILL ID 83853-0355	(604)-866-5772
Computer Design Lab	RR1 Box 36, RHINELAND MO 65069	(314)-236-4373
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Windsor Consulting Group	2014 Cherokee Pkwy, Suite J, LOUISVILLE KY 40204	(502)-454-0054
* Wittman Computer Products	7376 North Bergen Rd, BERGEN NY 14416	(716)-494-1506

* Indicates corporate member of the OS-9 Users Group

This article marks the premiere of a new series of Basic09 tutorials by Bob Devries from Australia. One or two articles from the series will appear each issue, depending on space. (Queen's English spelling mode enabled...)

Part 1 of 14

It appears that many OS-9 users don't get into programming because they don't understand the manuals supplied with the programming languages. I must say that I can understand that some people would have trouble, especially as some of the concepts are particularly obscure. I will attempt to remedy this problem by presenting some programme samples in Basic09 and comparing them, where possible to regular Disk Extended Basic (ugh!) programmes. Here we go!

The first problem area, I think, is the DIMensioning of ALL variables. Anyone who has used RSBasic will realise that this is not done except where a multi-dimensioned array is used, and then only when that array has dimensions beyond 10. Now have a look at this small Basic09 programme:

```
PROCEDURE Number
FOR i = 32 TO 122
  PRINT i
NEXT i
```

In this example, Basic09 assumes that the variable is a REAL, try it and you'll see that the programme prints 32. 33. 34. etc. This tells us that Basic09 is printing what it thinks are REAL variables. If you insert a line to DIMension the variable i to INTEGER by inserting the line:

```
DIM i:INTEGER
```

Place this line at the beginning of the programme, and run it again, and you will see that the numbers are now 32 33 34 etc. By the way, you don't type in the words 'PROCEDURE Number', Basic09 does this for you.

```
PROCEDURE Character
FOR i = 32 TO 122
  PRINT CHR$(i);
NEXT i
```

With this one, I have not DIMensioned any variables. The programme will still work, but Basic09 will round the variable to the nearest integer value. Be careful, if you are using a calculation to arrive at the value of variable i, you may get unpredictable results if it is not dimensioned. Some calculations may well result in say, 53.00001. If this is used to select a CHR\$ character, it will fail!

Next, we will look the OS-9 path system. You have probably all seen that when a programme needs to open a file, a variable is used, most often called 'path', like this:

```
OPEN #path, "datafile":READ
```

In RSBasic, this would be written like this:

```
OPEN "I", #1, "datafile"
```

In RSBasic, the programmer supplies the file number, because it will be the ONLY file open at the time, unless others were opened by the same programme. In OS-9, because of its multi-tasking capabilities, the operating system supplies the file number. To this end, the variable MUST be DIMensioned as an INTEGER. You will get garbage results if you dimension the path variable as type BYTE. You will also notice another similarity, the word 'READ' has the same function as 'I' in RSBasic. Path numbers are, as in RSBasic, not only used for opening disk files, but also for sending data to the printer, and the screen (if that screen is not the current screen). Of course, you can't have tape files in OS-9, so #-1 is not used at all. As an example, here is how you would print data to the printer:

```
PROCEDURE printer
DIM print_path:integer
OPEN #print_path, "/p":WRITE
PRINT #print_path, "Hello world"
PRINT #print_path, "This is your
printer."
CLOSE #print_path
```

Of course, you don't have to use elaborate variable names the way I did, it was only for demonstration purposes, 'pr' would suffice.

With RSBasic, you don't have to open a path to the screen, and indeed if you just want to print something to the current screen in Basic09, as I did in the first examples, you don't need to do it in Basic09 either. However, if you wish to say, create a graphics screen to do some drawing, you will need to open a new screen to do this. Try this little programme:

```
PROCEDURE Program
DIM wpath:INTEGER
DIM a:STRING[1]
OPEN #wpath, "/w":UPDATE
```

```
RUN gfx2(  
    wpath,"DWSet",7,0,0,80,24,0,1,1)  
RUN gfx2(wpath,"Font",200,1)  
RUN gfx2(wpath,"Select")  
PRINT #wpath,"Hello this is your  
    Basic09 graphics screen"  
RUN gfx2(wpath,"Line",0,0,639,191)  
a=""  
WHILE a="" DO  
    RUN inkey(wpath,a)  
ENDWHILE  
RUN gfx2(1,"Select")  
RUN gfx2(wpath,"DWEnd")  
CLOSE #wpath  
END
```

Several new concepts are presented in this little programme. First off, in the DIM statement, I have 'DIM a:STRING[1]'. This makes 'a' a string variable of one character length.

Next, we open a path to a new window using the 'universal' window descriptor '/w'. This descriptor, which I hope you all have in your OS9Boot file, allows you to open a screen on the next available window. I have used the word 'UPDATE' there to tell Basic09 that I want to both READ and WRITE to the screen. After that, I used the command 'RUN'. This tells Basic09 that I want to execute a procedure which is not part of the current procedure. In this case it is 'gfx2', which is in the CMDS directory along with 'inkey', 'syscall', and 'RunB'. Gfx2 is a graphics interpreter programme subroutine, which is written in machine code, and has the capability to do various graphics commands. The commands are all mentioned in your Basic09 manual.

The first one I used was 'DWSet' which is like OS-9's WCREATE command, and sets up the window to the type and size we want. Before the command word, we tell Basic09 which path number to use, as returned by the OPEN command used previously. The numbers used after the 'DWSet' command are for screen type, x-coordinate of the top left character of the screen, then y-coordinate, then screen width (in characters), and screen height, then foreground, background and border palette registers to use.

The next one is 'Font'. I used font group number 200 (which it must always be), and font number 1. After that I used the 'Select' command, which has the same result as pressing the 'CLEAR' key; it displays the screen I just created.

Now, finally, I can print something to the screen. As I mentioned before, I need to tell Basic09 which path to use to print on my new screen, otherwise, it will end up on the

wrong screen, the Basic09 editor screen for example, if I did not include the variable 'wpath'. Also, I can now draw lines, circles, boxes, and so on, on the screen.

Another thing which could be added at this point is the use of Overlay Windows. For these, I would use the following code:

```
RUN gfx2(  
    wpath,"OWSet",1,10,10,20,10,1,0)  
PRINT #wpath,"Overlay Window Opened"  
  
RUN gfx2(wpath,"OWEnd")
```

Place the first three lines after the line which draws the line, and the last line after the ENDWHILE line.

You will notice that to print on the overlay window, I used the same path number as before. OS-9 does not need to OPEN a path for overlay windows, so no new path number is used. You'll see that I used the command 'Line' to draw a diagonal line across the screen. I gave it the x and y coordinates of the start points first, then of the end points. Next I used the 'OWSet' command, which created the overlay window. The parameters for OWSet are; save switch (so that the original screen may be restored), x coordinate and y coordinate of top left corner, x size, and y size of window, and foreground and background palette registers. Note: there is an error in the OS-9 manual on page 3-24 in the Windowing System section. It says there ...PRN1 PRN2 where PRN1 is background palette register, and PRN2 is foreground palette register. This is incorrect, and should be the other way around. After waiting for a keypress using the inkey routine, the overlay window is closed, then the base (Basic09 Editor) screen is re-selected, and the graphics screen is de-selected, and its path is closed.

The figure 1 in the 'Select' command refers to the STD-OUT stream of OS-9.

You will notice that, in all my examples, I have not used line numbers.

These are neither necessary, nor desirable.

In my next article, I will show how to use the TYPE command, and use it to write to a database file record using GET and PUT.

Regards, Bob Devries
(bob@paxnet.com.au)

Part 2 of 14

Another problem area for programmers recently converted to Basic09 is the TYPE statement. This is used when a programmer needs to lump together several variables to be referred to as one unit. Let me give you an example. Say I want to write a little database programme to keep names, addresses, and phone numbers. Here's what the start of the programme would look like:

```
PROCEDURE Program
TYPE record=surname:STRING[20];
firstname:STRING[20]; street
:STRING [20]; city:STRING[20];
state:STRING[3]; postcode
:INTEGER; area:STRING [3];
phone:STRING[7]
DIM address:record
```

A database entry is a complex variable called 'address' of TYPE 'record'. That is, the variable 'record' has in it all the variables referred to in 'record'. So to refer to the 'city' field in the database entry, I would call it 'address.city', easy see ?

If I want to fill each of the variables of the complex variable address, I could do this:

```
address.surname = "DEVRIES"
address.firstname = "BOB"
address.street = "21 Virgo Street"
address.city = "INALA"
address.state = "Qld"
address.postcode = 4077
address.area = "07"
address.phone = "2787209"
```

If I want to write a database entry to a disk file, I would merely do this:

```
PUT #file, address
```

This will put all the variables which make up the complex variable 'address' into the diskfile one after the other. Of course the diskfile must have been opened first.

Similarly, to read an existing entry from a diskfile, I would use this line:

```
GET #file, address
```

If the disk file was 20 entries long, and I wanted to get the fifteenth one, I would first seek to the fourteenth (all records start at the zeroeth) record like this:

```
SEEK #file,14 * SIZE(address)
```

Then I would read the entry as before.

Here is a sample piece of programme which sets up the database record in memory using TYPE, and fills it, and then displays it in an overlay window. One thing you should be aware of, you **MUST** initialise variables in Basic09, because all variables are filled with garbage after being dimensioned.

```
PROCEDURE Program
TYPE record=surname:STRING[20];
firstname:STRING[20]; street
:STRING [20]; city:STRING[20];
state:STRING[3]; postcode
:INTEGER; area:STRING [3];
phone:STRING[7]
DIM address:record
DIM file:INTEGER
DIM a:STRING[1]
```

```
PRINT CHR$(12)
```

```
address.surname="Bentzen"
address.firstname="Gordon"
address.street="8 Odin Street"
address.city="Sunnybank"
address.state="Qld"
address.postcode=4109
address.area="07"
address.phone="3443881"
```

```
RUN gfx2("OWSet",1,9,4,32,11,1,0)
RUN gfx2("OWSet",0,10,5,30,9,0,1)
```

```
PRINT "Surname:";
PRINT address.surname
PRINT "Firstname:";
PRINT address.firstname
PRINT "Street:";
PRINT address.street
PRINT "City:";
PRINT address.city
PRINT "State:";
PRINT address.state
PRINT "Postcode:";
PRINT USING "i5",address.postcode
PRINT "Area code:";
PRINT address.area
PRINT "Phone:";
PRINT address.phone
a=""
WHILE a="" DO
  RUN inkey(a)
```

ENDWHILE

```
OPEN #file,"DATABASE":UPDATE
SEEK #file,0
PUT #file,address
CLOSE #file
```

```
RUN gfx2("OWEnd")
RUN gfx2("OWEnd")
```

I'll give you a run-down on what is in this programme.

First, the TYPE command, setting up the memory image of the database record. Next, dimension the complex variable, as well as some other useful variables. Then I filled the various parts of the complex variable with data for one record of the database with Gordon's name, address etc. No doubt you'll understand now that to access each part of the database record, its identifier is 'address.xxxxxxx'

where the x's are the various sections of the record, e.g. city.

Now to display the record, I open an overlay window big enough to display the fields of the record, and print them. Notice the use of PRINT USING for the postcode field. For this, you must use a format length of one more than the length of the variable, hence, 'i5'. Next I wait for a key-press before closing the overlay, and writing the record, and quitting. In this example, the record is always written to position zero of the file.

Next issue, I'll show you how to convert programmes from other BASIC languages, including RSBASIC, GWBASIC etc. I'll include a working example, in both the original format, and the converted Basic09 programme.

Regards, Bob Devries
(bob@paxnet.com.au)

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The OS-9 Community Network Software Library

The OS-9 Users Group and the OS-9 Community Network (OCN) have formed an association for the distribution of OS-9 software. Through the OCN Regional Libraries, ALL the software will be available to anyone who wants it. These libraries are located throughout the United States and Canada at the present time. (See the BBS listings.)

How it Works:

OCN is a loose network of Bulletin Board Systems, most of which are connected to the FIDO net. The complete OCN library is carried by most of these sites. You may call any of the OCN libraries and download on the first call most of the time. Files may also be requested via FIDO freq. Some of these libraries are also connected to the Internet.

Once a piece of software is received by the International Librarian, Tim Jones in Austin Texas, it is sent to all the participating OCN BBS libraries usually within 48 hours.

If you have written software that you wish distributed, upload it to Compuserve or Chestnut, and let Tim know, or upload it to one of the OCN Regional BBS's, let the sysop know and it will be sent to Tim.

To simplify the work in maintaining the library, submissions should be archived using lha v2.11b or higher, and the archive name should use the 8.3 filename.ext convention. Filenames within the archive can be any valid OS-9 filename.

Can you carry the library on your BBS? YES!

The OCN and OS9UG are dedicated to the development, preservation, and continuance of the OS9 system. Therefore we make this software available to all who want it. We support all flavors of OS9: 6809, 6309, 68000, OS9000 and PowerPC. We ask you to do the same as its comes into use in your area.

Currently sets of disks in 6809, 68000 and PCDos format are available. If you contact Tim Jones or me, Dave Kelly, we can put you on the mailing list. You may be asked to defray some/all of the cost of the postage. You will be instructed to mail the disks back to Tim or on to the next person on the mailing list.

At present the library consists of approximately 100 5-1/4" disks. 3-1/2" disks are also available. We ask that you be prepared to transfer the files to your system in a timely manner so the next person on the list can receive the disks.

More information will be posted when a system of file notification is developed. Currently a new file is announced on the CoCo, OS9 and MM1_Tech FIDO echoes. A list of all files may be posted in the MOTD at a later date.

If you plan to carry the library on your BBS, we ask that your BBS conform to two simple rules:

1. The BBS and files are open to ALL within reason; and
2. The directories for the library conform to the OCN standard.

If you have any questions, please please contact us at:

Dave Kelly
12306 Aste Lane
HOUSTON TX 77065
Fido echoes: OS9 or CoCo
Fido: 1:106/941
Voice: 713-894-7444

or Tim Jones
2666 Piping Rock Tr
AUSTIN TX 78748
Fido echoes: OS9 or CoCo
Fido: 1:382/107
Internet: tjones@infomail.com
BBS: (512)280-6578

I am excited about this association. It brings together 2 groups dedicated to the same goal. I hope you will be also.

Dave Kelly
OS-9 UG Librarian

Microware's Pipelines

Pipelines Volume 8, Number 1 is now available. Highlights from this issue include:

- 1995 DAVID Developers Conference Slated for September: Following upon last year's sellout event, this year's session will be held September 26-29 at the San Jose Convention Center, San Jose, CA. It will feature the launch of the DAVID Developers Association (DDA).
- DAVID System Version 2.0: new release announced.
- OS-9 Primer, OS-9 Insights Edition 3.0 Now Available: Mark Heilpern's new Primer is now available, as well as an update to Peter Dibble's Insights.
- Introducing FasTrak for Windows: Microware's Integrated Development Environment is now available for Windows as well as Unix.

OS-9 International (from EFFO)

The May, 1995 issue (Vol. 4, Issue 2) has been published, and maintains this journal's tradition of solid technical articles describing various aspects of OS-9 computing.

Highlights from this issue include articles covering:

- Considerations related to using PCMCIA cards with "non-PC" operating systems.
- Using Programmable Logic Controls (PLC) under OS-9 for control system applications
- An OS-9 Memory Module tutorial
- How Subroutine Modules can be used to implement Shared Libraries.
- An overview of the OS-9 port of GNU 'make'.
- An introduction to OS-9 debuggers.

See the "OS-9 Periodical List" for subscription info.

OS-9 Periodical List

Compiled by Ed Jones

MAGAZINES	PUBLISHER	PRICE	ADDRESS
the world of 68' micros	Frank Swygert	\$25.00 USA \$32.00 Canada (8 issues; one year)	Farna Systems PO Box 321 Warner Robins, GA 31099-0321 (912)328-7859 (voice)
MicroDisk	Farna Systems	\$40.00 USA \$44.00 Canada	(See 68' Micros above)
OS-9 International	European Forum for OS-9	Swiss Francs for one year (three issues): Switzerland: 25.00 Europe: 30.00 Overseas: 35.00	EFFO, PO Box CH-8606 Greifensee, Switzerland (os9int@effo.ch)
Nine Times	JWT Enterprises	\$34.95 USA \$35.95 Canada (6 issues; one year)	JWT Enterprises 5755 Lockwood Blvd. Youngstown, OH, 44512 (216)758-7694 (voice)
MOTD	OS-9 Users Group Inc.	\$25.00 USA and Canada \$30.00 others	OS-9 Users Group, Inc. 6158 West 63rd Street Suite #109, Chicago, IL 60638
OS-9 Newsletter	Bellingham OS-9 UG	\$10 (12 issues)	OS-9 Newsletter 3404 Illinois Ln Bellingham, WA 98226-4238
CoCo 1-2-3	Glenside CoCo Club	\$15.00 USA	Glenside CoCo Club RR #2, Box 67 Forrest, IL 61741-9629 (708)428-3576 (voice) (708)428-0436 (BBS)

The Users Group is undertaking a project to establish a centralized OS-9 information resource, containing data ranging from OS-9 Users to Bulletin Boards to Vendors. This information will be available to both individual and corporate Users Group members for a nominal charge. The co-ordinator for this project is Chris Perrault.

Bulletin Board Systems

Bulletin Board Systems (or BBSs for short), among other on-line services, play an amazing role in the continuing support of OS-9. In this, our second installment in the Sourcebook series, we will be discussing the importance of BBSs within the OS-9 community and why they play a bigger role here than they might in some of the more mainstream system environments. Following this article will be an entry form for users or system operators (sysops) to fill out and return to the UG. All information gathered will be added to the Sourcebook BBS Database.

The Online Environment

In today's media it is often hard, if not impossible to overlook the widespread news related to what is now all-too-often referred to as 'The Information Superhighway'. While this is an exciting time to watch the technology of online telecommunications come of age in mainstream society, the term 'Information Superhighway' is rather vague and can be misleading at times. While the focus of this article is to describe OS-9's place within the online community, I will attempt clarify the differences between some of major services provided within it.

Commercial Online Services

Online services such as Delphi, CompuServe Information Service, Genie, Prodigy, and America Online are some of the major players in telecommunications services. While they only represent a small percentage of all services out there, they are recognized as some of the most successful in the business. A commercial service differs from independent networks and bulletin board systems in that they are run by companies rather than individuals and require a membership fee to gain access. Some of the basic services provided by most of these companies include Email, Special Interest Groups(Sigs), News-Weather-Sports, Online Shopping, as well as access to the Internet. Many other services are available, depending on the information service you are looking at. Delphi, CompuServe, and Genie all offer support for OS-9, although most of the OS-9 related activity tends to take place on Delphi. These services will be also be part of the OS-9 Users Group Sourcebook in the near future.

Bulletin Board Systems

The major difference between BBSs and Commercial Information Services, is that, while the Commercial ser-

vices are run by companies, a BBS is usually run by one sysop or a small team of them, and usually require no sign-up fee, although small donations are commonly requested in order to help these individuals keep their systems maintained. The sysops tend to be common people who run boards simply as a hobby and for personal enjoyment more than anything else. Services available on BBSs differ from board to board depending on the system, the targeted membership and audience, as well as the software used to run it. Some of the common services on most boards include Email, message bases, and a file database section that allows you to download many Public domain and shareware programs. Also, access to many different online networks such as Fido-Net and the Internet is not uncommon. Fido-Net connected bulletin boards are some of the most active in the OS-9 and Color Computer community (for those not familiar with the Color Computer, also known as "Coco", it is a 6809 based computer that runs the Level II flavour of OS-9. The majority of personal OS-9 users are currently Coco owners). While it is not unusual for BBSs to grow into boards that require a sign up fee and charge for services that compete with the bigger companies, the general image of a BBS is that of a small independently run board.

Internet

The Internet covers a very broad spectrum of areas and it is beyond the scope of this article to cover very much of it, but I will attempt to cover all the areas in which they affect OS-9. For those interested in the internet, a trip to the local bookstore will bring you face to face with an almost insurmountable quantity of books on the subject, so you will want to look there.

Of all the different areas of the Internet, the three most utilised by OS-9 users are the FTP sites, Usenet newsgroups, and mailing lists. FTP sites are very similar to a file database that you might find on a BBS where you can download programs and other files, only the FTP site is more of an independent home for files, not usually connected to a BBSs. Also, instead of transferring the files to YOUR computer, FTP (named after its 'File Transfer Protocol'), usually transfers the files either to or from the host system you are using to access the site. Exceptions to this

would be if your machine is acting as a host system, or is running protocols known as TCP/IP or SLIP. Usenet Newsgroups are the Internet equivalent of a forum message base that you would find on a BBS or Pay Service. A mailing list is very similar to a usenet newsgroup in that it allows you to access public messages for a specific topic, with the exception that you must SUBSCRIBE to the topic list by sending an email message to the listserver with your name and the signup command (subscribe). In return the messages are distributed to each individual on the list through email rather than being placed in one spot for everyone to access. This can cause a very cluttered mailbox for those that subscribe to busy lists, and also don't have a very manageable email system to organize those messages. Fortunately, it is possible to use a usenet 'gateway' to allow the user to read the messages through a usenet menu. (This is what the author does with the Cocolist on Delphi).

Fido-Net

Fido-Net is probably the most utilized network within the BBS community. While Internet is far more complex and offers more features than Fido-Net, the one ace in the hole for Fido is that it does not require a hefty charge for BBS operators to access beyond long distance telephone charges, which can be hefty enough. Internet can run you a rather high bill just to gain access to a site with all the features which rubs off on the extra charge to the users accessing it. Fido-Net is meant as a network that allows users on separate bulletin board systems to communicate with each-other either through email, or through usenet-like message base areas (echos) that cover specific topics in their own group. The messages are then ECHOED throughout the network similar to the way that a mailing list operates. There are currently an OS-9 and an MM1_TECH (for the MM/1 and other OS-9/68K personal systems) echoes on Fido. OS-9 Level II is also discussed often on the Color Computer Echo.

Putting it all together...

While the intent of the UG is to keep ALL members of the OS-9 community informed and up-to-date, including those who do not use modems, we definitely feel it is nec-

essary to harness the online resources that are out there. One of the many goals of this Sourcebook project to take all these services that are at our disposal and keep them grouped in an always up-to-date database. With this accomplished, we will be able to use the UG as a point of reference for those who need to find out where or how to access a BBS or other online service. While many people attempt to establish a well maintained list of active bulletin boards, very few, if even any, are actually able to keep them maintained for long, given the rate that boards are both started and taken offline. The Sourcebook bbslist will provide the one place sysops can be sure to go to with news of a new board, or a change in status of an existing one. Users will be able to find a BBS in their area by requesting a list of boards matching any criteria they wish (for example: Does it support Level II, or Gwindows, is it in 'XXX' area code?).

How Do We Make it Work?

Well, we start by...

- 1) Sysops, return the entry form or more likely in your case, send e-mail to the appropriate address with the info requested on the form.
- 2) Keep the project coordinator posted regularly (every 6 months or so) on the status of your board and be sure to let him know of any changes in its status. Perhaps write up an article about your board to be published in the MOTD. That's one way to attract users.
- 3) Let's keep the communication lines open between different online services. Hopefully shortly after the Sourcebook is set up, we will have a project in place that will ensure this happens. For it to work will require volunteers from all ends of the online world. More will be posted on this in the future.
- 4) While you can still be included in the Sourcebook even if you are not a member of the UG, you are still encouraged to become one. With the MOTD being home to all official information regarding the project, it is not a high price to keep up to date.

Industrial Strength OS-9

OS-9 is currently available in several forms, and is used for a large variety of purposes. Arguably, it is probably one of the most flexible operating systems around. Many OS-9 retailers are now testing the waters of the personal market to see what kind of inroads can be made there. However, the real bread and butter market for OS-9, and where it has been deeply entrenched for years now, is in the that of the industrial user.

While we rarely, if ever, actually notice it, OS-9 is in use all around us. Some of us cross the streets, with the aid of traffic lights that are controlled by none other than our favorite OS. NASA has a history with it, having used OS-9 for a long time to help aid the operation of the space shuttle. Those computers inside our cars that help control the system: guess which OS is embedded into many of those? So, while the eye rarely sees it, OS-9 is all around us, and those are just a small sample of some of the prod-

ucts that make use of it.

Many of these products require a real time operating system, something that most if not all of the mainstream operating systems on the market are not. OS-9 just happens to fit the bill perfectly, and is why it is embraced by companies worldwide, over many of the 'popular' systems which simply are not built for such applications.

If you or your company uses Industrial OS-9 please read on.

Like all users, even the big companies sometimes need help. Someone may be looking for a way to transfer data from an MS-DOS formatted disk to an OS-9 formatted disk. You may want to know if an updated version of an application you use has been released yet. Perhaps you are ready to go out and make a new purchase for your company, and you want to get a list of OS-9 Hardware and Software retailers as an alternative to someone you are already dealing with. There are a number of roadblocks that can get in the way of you finishing that important project. This is where the UG comes in.

With its focus on growth and broad support, the UG has kept its doors open to users of all the different varieties of OS-9. It is our goal to also extend our hand to you, the industrial user to keep the communication lines open and to help keep you up-to-date on all the latest developments

that may affect your company. We also intend to be there to help you with all those nagging little problems that keep you at a standstill.

BUT! If the UG is to become a positive factor for the industrial community, we need to hear from you, and it is very simple to start. You can begin by filling out the Sourcebook entry form at the end of this article. This will add your company's name and other information to the OS-9 Users Group Sourcebook, and that is the first step in helping to bring the community together. Then you are encouraged to let us know what YOU would like to see the Users' Group do to assist users like yourself, and to speak with your UG representative about any ideas or suggestions you have to help make us a better Users Group. It is our intention to move forward, and we are doing just that, but without input from users from all ends of the OS-9 spectrum, we will amount to nothing more than a name. Keep in mind, to have your entry added to the Sourcebook, there is no obligation on your part whatsoever, and you are not required to be a UG member. You are however ENCOURAGED to join the OS-9 Users Group, where you will be kept up-to-date on the latest developments with the Sourcebook and other happenings around the OS-9 world. The entry form at the end of this issue will also contain a section where you can ask any questions or offer any suggestions and comments. These will be read by both the UG President and the sourcebook coordinator, so all suggestions will be noted.

Summary

In closing, 1995 has been shaping up as a very busy year for The OS-9 Users Group, and good things are ahead for the community. Don't stand on the sidelines and wait for

things to happen!

Check into the game and together we can get things done!

The Editor's Log

by Ken Scales

As noted elsewhere, I have filled in as Editor for this issue, since Joel was busy moving to Des Moines to begin his new job: working for *Microware Systems Corporation*.

One thing that I feel stands out in this issue is the activity and support that is currently underway within the Users Group. I sometimes see messages online asking "Why should I join the Users Group? What does it have to offer me?"

The minutes from the Annual General Meeting and regular bi-monthly BOD meeting; the regularly scheduled online conferences; the link-up with the OCN software library; Chris Perrault's Sourcebook initiative; articles submitted for MOTD publication -- all of these clearly demonstrate the efforts and progress the Users Group has been making. This is a reflection of the dedication and

time put forward by individual members to help make the UG a success. And that's what the Users Group is all about.

By the way, those of you who are active on the Internet may be interested in checking out the OS-9 and UG home pages, as listed below.

Hope you have enjoyed this issue.

Ken Scales, Director-at-Large
MOTD Acting Editor

OS-9 WWW Home Page

<http://www.wisc.edu/~pruyn/os9faq.html>

Users Group WWW Home Page

<http://www.wisc.edu/~pruyn/os9ugfaq.html>

**The OS-9 User's Group Sourcebook
Bulletin Board System Entry Form**

BBS Name: _____
Sysop: _____
Phone Number: (____) _____
City: _____ State: _____ Country Code: _____

7/E/1 or 8/N/1?(circle one)

Lowest Baud Rate Supported _____

Highest Baud Rate Supported _____

Does this BBS have a Fido-Net Connection? _____

Does it have an Internet Connection? _____

Supports(check all the apply):

OS-9 Level I & II _____ OS-9 68000 _____ OS-9000 _____

Please feel free to add any additional comments and information below. The more we know about your BBS, the better!

**The OS-9 Users Group, Inc.
6158 West 63rd Street
Suite 109
Chicago, IL 60638
U.S.A.**

**The OS-9 Users' Group Sourcebook
Industrial User Entry Form**

Company Name _____
Street _____ City _____ State _____
Zip Code _____ Country _____
Telephone(w/area code) _____
Email _____

Please give a description what your company specializes in:

Briefly summarize the OS-9 system(s) used by your company:

Finally, please give a brief description of HOW OS-9 is used within your workplace:

Please feel free to enclose any additional comments and information. The more we know about your company, the better!

**The OS-9 Users Group, Inc.
6158 West 63rd Street
Suite 109
Chicago, IL 60638
U.S.A.**

